

Accurate Identification and Mitigation of Electromagnetic Threats to Aircraft, Phase I

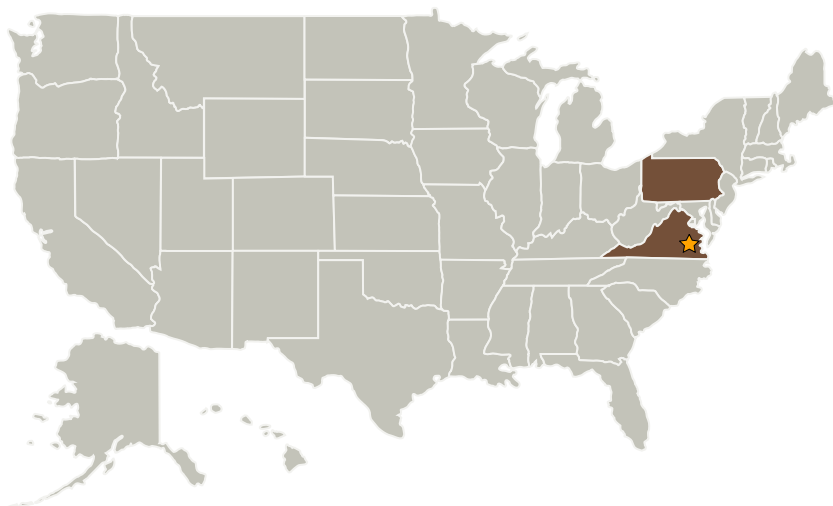
Completed Technology Project (2005 - 2005)



Project Introduction

The technology required to deploy Directed Energy Weapons (DEW) for use against hardened military targets may be constrained to just a few nations, but for soft targets like commercial aircraft and Air Transportation System (ATS) assets options are plenty for terrorists, organized crime or rogue states hoping to inflict harm. These devices are readily configured for covert operations favored by such groups. This work will identify, quantify and provide guidance to intercept RF, EMP and HPM weapons terrorists might deploy against the ATS. Designs within this group will be categorized by type of design, quantitatively analyzed to determine threat parameters and broken down into components that can be screened by ATS personnel. The end product of this work will directly improve the safety and security of the ATS.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
Nokomis, Inc.	Supporting Organization	Industry	Charleroi, Pennsylvania



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

Pennsylvania

Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Walter Keller

Technology Areas

Primary:

- TX02 Flight Computing and Avionics
 - └ TX02.3 Avionics Tools, Models, and Analysis
 - └ TX02.3.4 Electromagnetic Environment Effects